EUROPEAN PATENT OFFICE

Patent Abstracts of Japan

PUBLICATION NUMBER : 01160367
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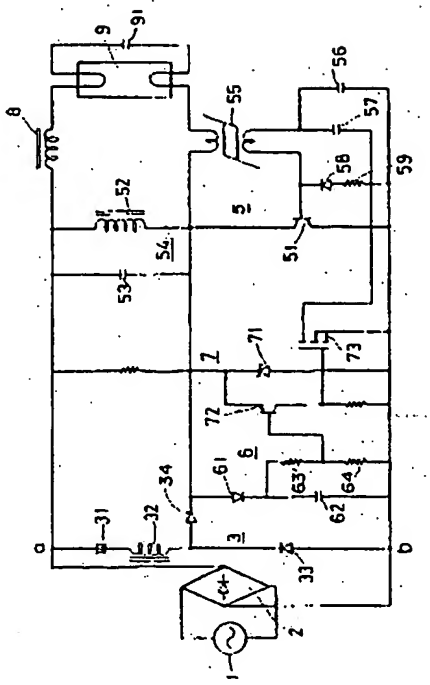
APPLICATION NUMBER : 62317463

APPLICANT : TOSHIBA ELECTRIC EQUIP CORP;

INVENTOR : AOIKE MINAKI;

INT.CL. : H02M 7/48 H05B 41/24 H05B 41/29

TITLE : INVERTER



ABSTRACT : PURPOSE: To provide high input power factor by making more delay of response of control action than a half period of AC power supply and raising slowly when the oscillating voltage is raising.

CONSTITUTION: A switching circuit of inverter-applied discharge lamp integrates a full-rectified circuit 2 which connects to AC power supply 1 and supplies non-smoothing DC current from this part for inverter 5 together with for the series circuits which are composed of capacitor 31 for power accumulation, inductor 32 and diode 33 of the partly smoothed circuit 3. Peak voltage detector 6 and frequency control circuit 7 are also provided. Inverter 5 consists of main switching transistor(Tr) 51, parallel oscillating circuit 54 composed of inductor 52 and capacitor 53, saturable current transformer 55 for plus feedback and capacitors 56–57. Peak voltage detector 6 detects the peak voltage of collector voltage (Tr) 51 and transfers it to frequency control circuit 7. By this reason, the total envelope of waveforms are similar to the DC power supply when the input voltage is low and the oscillating voltage raising.

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APPLICANT : DENSO CORP;

INVENTOR : NAGATA TETSUYA;

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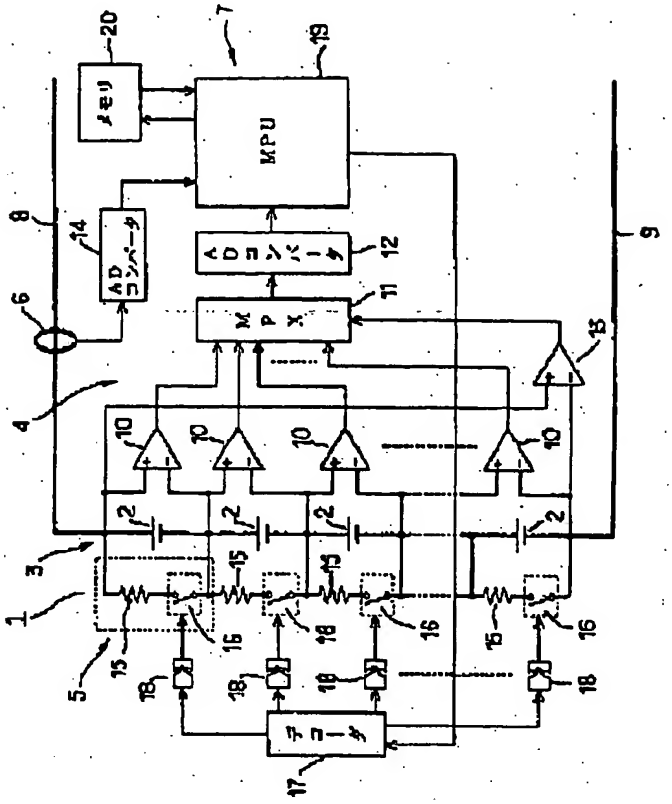
TITLE : METHOD FOR JUDGING SCATTERING OF BATTERY PACK AND BATTERY DEVICE



ABSTRACT : PROBLEM TO BE SOLVED: To effectively cancel the scattering of SOC between unit cells, and at the same time to achieve the inexpensive configuration of a circuit for detecting the voltage of each unit cell.

SOLUTION: A number of unit cells 2 consisting of a lithium-based secondary battery are connected in series for composing a battery pack 3. A voltage detection circuit 4 is provided, where the circuit 4 consists of a differential amplifier 10 for detecting the voltage of each unit cell 2, a multiplexer 11, and an AD converter 12. In each unit cell 2, a discharge circuit 5 with a discharge resistor 15 is provided. A control device 7 detects the SOC of the entire battery pack 3 according to the detection of a current sensor 6, obtains the OCV of each unit cell 2 based on the voltage of each unit cell 2 at that time, obtains the SOC according to the OCV of each unit cell 2 when the change rate of the OCV of each unit cell 2 corresponding to the change of the SOC of the entire battery pack 3 exceeds a specific value, and judges scattering. The unit cell with a large scattering of the SOC is discharged for correcting the scattering.